

A B S T R A C T

AN OPTICAL DEVICE AND A METHOD FOR CONVERTING WDM SIGNALS
INTO AN OTDM SIGNAL AND VICE-VERSA

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The invention relates to a device and a method for
converting WDM signals into an OTDM signal. The device
comprises shifting means (102, 103, 104) adapted to
introduce a time shift between the pulses of the WDM
10 signals carried by the optical carriers, modulation means
(112, 113, 114) adapted to modify the optical power of
the WDM signals, an optical temporal multiplexer/
demultiplexer (120), a birefringent propagation medium
(130) into which the WDM signals are injected in such a
15 manner as to achieve a soliton trapping phenomenon, and
absorption means (140) adapted to introduce optical
losses into the components of the OTDM signal. This
device performs WDM/OTDM conversion at very high bit
rates. It also performs OTDM/WDM conversion. It is
20 intended to be installed in long-haul telecommunication
networks.

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Translation of the title and the abstract as they were when originally filed by the
35 Applicant. No account has been taken of any changes that may have been made
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38.2, and/or 48.3.